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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|--------------------------|-------------------------|------------------|
| 10/028,069 | 12/20/2001 | Arunkumar B. Thippeswamy | CISCP740 | 2860 |
| 54406 | 7590 | 03/15/2006 | EXAMINER SAM, PHIRIN | |
| AKA CHAN LLP / CISCO 900 LAFAYETTE STREET SUITE 710 SANTA CLARA, CA 95050 | | | ART UNIT 2661 | PAPER NUMBER |

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/028,069 | THIPPESWAMY ET AL. | |
| | Examiner | Art Unit | |
| | Phirin Sam | 2661 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 December 2001.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-36 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 27-36 is/are allowed.

6) Claim(s) 1,4-11,14-17,20-22,25 and 26 is/are rejected.

7) Claim(s) 2,3,12,13,18,19,23 and 24 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 20 December 2001 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 091602

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 6, 9-11, 14, 17, 21, 22, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,636,482 (hereinafter referred as “Cloonan”).

Cloonan discloses the invention (**claims 1, 10, and 17**) as claimed including a method for forwarding a packet upstream from a subscriber unit to a central access point, the packet including destination information and source information, the method comprising:

- (a) determining a first value associated with the packet, the first value being one of a predetermined set of values, wherein the first value is determined using the destination information and the source information (see Fig. 2, col. 7, lines 23-61);
- (b) identifying a first service flow that is suitable for use to forward the packet, the first service flow being one of a set of service flows between the source and the destination, wherein the first service flow is identified using the first value associated with the packet (see Fig. 2, col. 7, lines 23-61);
- (c) sending the packet on the first service flow (see Fig. 2).

Regarding claim 4, Cloonan discloses assigning the first value to the first flow (see Figs. 2 and 3, col. 8, lines 4-7, 39-47).

Regarding claim 6, Cloonan discloses the central access point is a head-end (see Fig. 1, element 30, col. 2, lines 52-55).

Regarding claim 9, Cloonan discloses the set of service flows includes up to approximately sixteen service flows (see Fig. 2, col. 7, lines 37-44, wherein the administrator determines bandwidth assigned for each type of service flow on each upstream channel and the threshold value is for each of different types of service flows).

Regarding claims 11, 14, and 22, Cloonan discloses a method for forwarding packets upstream from a subscriber unit to a central access point, the method comprising:

- (a) identifying a number (N) of available service flows between the subscriber unit and the central access point (see Figs. 2 and 3, col. 7, lines 37-54, col.8, lines 4-18);
- (b) sending a first packet from the subscriber unit to the central access point on a first service flow included in the N available service flows (see Fig. 2, col.7, lines 45-61, when the request is accepted the subscriber unit starts to sending the packet);
- (c) sending an Nth packet from the subscriber unit to the central access point on an Nth service flow included in the N available service flows (see Fig. 2, col.7, lines 45-61, when the request is accepted the subscriber unit starts to sending the packet).

Regarding claims 21 and 26, Cloonan discloses a subscriber unit and a cable modem (see Figs. 1 and 2, col. 2, lines 49-55)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5, 7, 8, 15, 16, 20, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,636,482 (hereinafter referred as “Cloonan”) in view of US Patent 6,963,931 (hereinafter referred as “Bunn”).

Regarding claim 5, Cloonan does not disclose the destination information is a destination Internet protocol (IP) address and the source information is a source IP address. However, Bunn discloses the destination information is a destination Internet protocol (IP) address and the source information is a source IP address (see Fig. 9b, col. 17, lines 24-25). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the source IP and destination IP addresses teaching by Bunn with Cloonan. The motivation for doing so would have been to provide to allow the packet transfer across the Internet network. Therefore, it would have been obvious to combine Bunn and Cloonan to obtain the invention as specified in the claim 5.

Regarding claims 7, 8, 15, 16, 20, and 25, Cloonan does not disclose the subscriber unit and the head-end are associated with DOCSIS protocol. However, Bunn discloses DOCSIS

protocol (see col. 7, lines 7-14, 60-63). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the DOCSIS protocol teaching by Bunn with Cloonan. The motivation for doing so would have been to provide to utilize more efficient payload header suppression in transferring data over a cable modem network read on column 1, lines 57-58. Therefore, it would have been obvious to combine Bunn and Cloonan to obtain the invention as specified in the claims 7, 8, 15, 16, 20, and 25.

Allowable Subject Matter

6. Claims 2, 3, 12, 13, 18, 19, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 27-36 are allowed.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - (1) US Patent 6,636,485 (Fijolek et al) discloses method and system for providing quality of service in a data-over cable system.
 - (2) US Pub. 2003/00816226 (Naor et al) discloses method of providing QOS and bandwidth allocation in a point to multi-point network.
 - (3) US Patent 6,104,700 (Haddock et al) discloses policy based quality of service.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on a compress schedule, from 8:00-5:30, first Wed off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272 - 3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

Date: March 10, 2006



PHIRIN SAM
PRIMARY EXAMINER